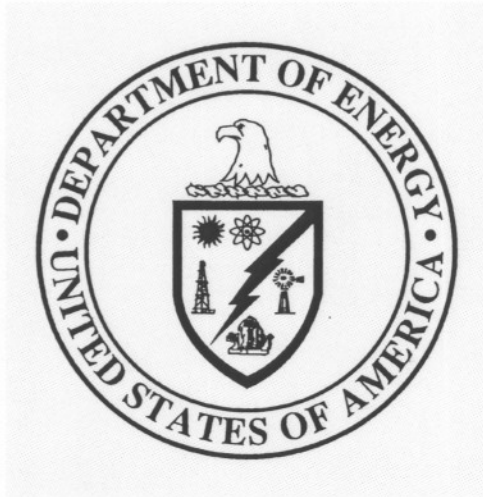


# **SAFETY SYSTEM OVERSIGHT PROGRAM FINAL ASSESSMENT REPORT**



**September 2005**

**U. S. Department of Energy  
Carlsbad Field Office**

# **Safety System Oversight Program**

## **Final Assessment Report**

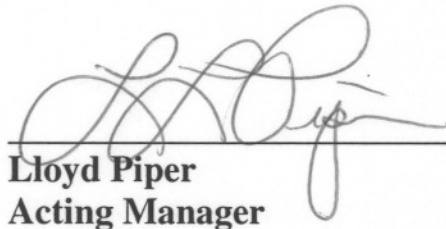
**Prepared by:**



**Chuan-Fu Wu**  
**Senior Technical Advisor**  
**Assessment Team Leader**

9/26/05  
**Date**

**Approved by:**



**Lloyd Piper**  
**Acting Manager**

9/26/05  
**Date**

**U.S. Department of Energy**  
**Carlsbad Field Office**

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## **1.0 INTRODUCTION**

As stated in DOE P 426.1, *Federal Technical Capability Policy for Defense Nuclear Facilities*, the U.S. Department of Energy (DOE) is committed to developing and maintaining a technically competent workforce to accomplish its mission in a safe and efficient manner through the Federal Technical Capability Program (FTCP). It is DOE policy that the program and functions described in DOE P 426.1 shall be used to recruit, deploy, develop, and retain a workforce that can ensure this occurs. One of the components of a successfully implemented FTCP is the periodic assessment of the program by both internal and external experts.

The FTCP is implemented at various DOE sites through each site's Technical Qualification Program (TQP). As explained in DOE M 426.1-1A, *Federal Technical Capability Panel Manual*, a key part of the overall TQP at each site is that site's Safety System Oversight (SSO) Qualification Program, an additional level of technical qualification aimed at qualifying and maintaining qualification for DOE SSO personnel at the site. SSO personnel are required, among other things, to monitor the performance of safety systems in DOE nuclear facilities and to evaluate the effectiveness of the management and operating (M&O) contractor's system engineer program in ensuring that these systems are effectively designed, implemented, and maintained.

In support of the mandate of DOE P 426.1 for periodic assessments, CBFO conducted an initial assessment of its SSO Program from November 30 through December 1, 2004. The assessment team was led by the CBFO Senior Technical Advisor, who also serves as an Agent of the Federal Technical Capability Panel. Team members included the DOE/NNSA Pantex Site Office Agent of the Federal Technical Capability Panel, CBFO staff, and CBFO Technical Assistance Contractor (CTAC) personnel. The team evaluated the effectiveness of the CBFO SSO Program, including the quality of CBFO oversight of the WIPP M&O contractor (Washington TRU Solutions, WTS) Cognizant Engineer Program. The results of that assessment are included as Attachment A of this report.

## **2.0 PURPOSE**

The initial assessment of 2004 identified two deficiencies in the CBFO SSO Program implementation. The purpose of this final assessment is to verify and document the closure of these deficiencies and to provide an overall review of the effectiveness of the SSO Program.

## **3.0 CORRECTION OF DEFICIENCIES**

The first deficiency is stated in Attachment A as follows:

*PGM.D1 – No formal CBFO SSO Program exists in relevant CBFO documents. Because there is no formal program, there is no formal assignment of SSO personnel to the eight safety systems at WIPP, no formal communication to WTS cognizant managers or cognizant engineers, and no process for establishing or updating CBFO SSO personnel roles and responsibilities.*

To correct this deficiency, the Director of the CBFO Office of Disposal (OD) issued a letter in August 2005, to the WIPP M&O contractor Operations Manager formally assigning Office of Disposal personnel to each of the designated WIPP safety systems (see Attachment B). These designated SSO personnel have the responsibility and authority to conduct oversight on behalf of the CBFO OD for their designated safety systems and for communication and coordination with the M&O contractor cognizant engineers assigned to those systems. The letter includes a formal assignment matrix, depicting each safety system and the responsible OD staff member.

Although these assignments had previously been informally made, this letter formally documents and communicates these assignments to the M&O contractor and provides a vehicle for updating such roles and responsibilities as necessary. This deficiency is closed.

The initial assessment also identified a second deficiency, stated in Attachment A as follows:

*TQ.D1 – There are four positions in the CBFO that have responsibilities for SSO personnel: the CBFO Manager, the Deputy Manager, the Assistant Manager for Operations, and the OD Director. All these supervisory positions are required to maintain STSM qualification per DOE M 426.1-1A. Currently, only the position description for Assistant Manager for Operations identifies STSM qualification as a requirement. The other three position descriptions must be revised to reflect the STSM requirement.*

Position descriptions (PDs) for these positions have been revised to include the STSM requirement. In addition, the Qualification Standard and Qualification Card for each of these positions have been revised to reflect the STSM requirement. This deficiency is therefore closed. The CBFO Deputy Manager is STSM-qualified. The Assistant Manager and the OD Director are in the process of completing STSM qualification requirements and will be qualified within 18 months from taking their positions.

#### **4.0 CONCLUSIONS**

Review of the functioning of the CBFO SSO Program since the initial assessment of 2004 reveals that the program continues to be well implemented and effective. With the closure of the only two deficiencies, the program now satisfies all DOE SSO requirements. CBFO SSO personnel continue to provide effective oversight over the safety systems to which they are assigned and to work cooperatively with the M&O contractor cognizant engineers to ensure safe and reliable operation of these important systems.

## **Appendix A**

# **CARLSBAD FIELD OFFICE SAFETY SYSTEM OVERSIGHT PROGRAM INITIAL ASSESSMENT REPORT**

**CARLSBAD FIELD OFFICE  
SAFETY SYSTEM OVERSIGHT  
PROGRAM ASSESSMENT REPORT**

**December 2004**



**U. S. Department of Energy  
Carlsbad Field Office**

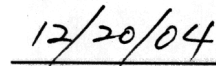
**Carlsbad Field Office  
Safety System Oversight  
Program Assessment Report**

**December 2004**

**Prepared by:**



**Chuan-Fu Wu  
Acting Deputy Manager/  
Assessment Team Leader**

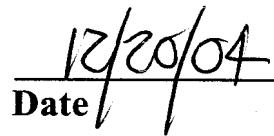


**Date**

**Approved by:**



**Lloyd Piper  
Acting Manager**



**Date**

**U.S. Department of Energy  
Carlsbad Field Office**



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## **1.0 INTRODUCTION**

As stated in DOE P 426.1, *Federal Technical Capability Policy for Defense Nuclear Facilities*, the U.S. Department of Energy (DOE) is committed to developing and maintaining a technically competent workforce to accomplish its mission in a safe and efficient manner through the Federal Technical Capability Program (FTCP). It is DOE policy that the program and functions described in DOE P 426.1 shall be used to recruit, deploy, develop, and retain a workforce that can ensure this occurs. One of the components of a successfully implemented FTCP is the periodic assessment of the program by both internal and external experts.

The FTCP is implemented at various DOE sites through each site's Technical Qualification Program (TQP). As explained in DOE M 426.1-1A, *Federal Technical Capability Panel Manual*, May 2004, a key part of the overall TQP at each site is that site's Safety System Oversight (SSO) Qualification Program, an additional level of technical qualification aimed at qualifying and maintaining qualification for DOE SSO personnel at the site. SSO personnel are required, among other things, to monitor the performance of safety systems in DOE nuclear facilities and to evaluate the effectiveness of the management and operating (M&O) contractor's Cognizant Engineer Program in ensuring that these systems are effectively designed, implemented, and maintained.

In support of the mandate of DOE P 426.1 for periodic assessments, CBFO conducted an initial self-assessment of its SSO Program from November 30 through December 1, 2004. The assessment evaluated both the qualification of SSO personnel and the quality of oversight of the M&O contractor's safety system Cognizant Engineer Program provided by CBFO SSO personnel. This report summarizes the results of that assessment.

## **2.0 PURPOSE**

The purpose of this assessment is to verify and assure that CBFO has in place a functioning and effective SSO Program that includes timely qualification of SSO personnel in accordance with DOE standards and that results in adequate oversight of the M&O contractor's safety system Cognizant Engineer Program.

## **3.0 SCOPE**

This assessment evaluated the implementation of an SSO Program at the Waste Isolation Pilot Plant (WIPP) by CBFO and the effectiveness of that program in providing oversight of the selection, implementation, and maintenance of WIPP safety systems and the implementation of safety management programs by the M&O contractor. The safety systems covered by this assessment included safety systems documented in DOE/WIPP-95-2065, *Waste Isolation Pilot Plant Contact-Handled (CH) Waste Documented Safety Analysis* (DSA), as well as those systems defined as "vital safety systems" in WIPP Procedure WP 09, *Engineering Conduct of Operations*. These systems are listed below:

- CH Confinement Ventilation System
- Underground Ventilation Filtration System

- Waste Handling Building Fire Suppression System and Fire Detection System
- Room Exit Continuous Air Monitors
- Waste Hoist ( using a brake system that is designated a Safety Significant System in the WIPP CH DSA)
- Central Monitoring System
- Waste Handling Building Structure Including Tornado Doors
- CH TRU Waste Handling Equipment

WIPP safety management programs include the Radiological Control Program, Industrial Hygiene Program, Operational Safety Program, Emergency Preparedness Program, and the Security Program.

This assessment focused on the CBFO SSO Program itself and the level of oversight provided through this program. Part of the evidence of oversight effectiveness includes a determination as to whether any past or present weaknesses in the M&O contractor's Cognizant Engineer Program responsible for WIPP safety systems were discovered and addressed through SSO Program oversight. Therefore, although the primary purpose of this assessment was not to evaluate the M&O contractor's Cognizant Engineer Program, the program was evaluated to the extent necessary to determine the effectiveness of CBFO SSO oversight.

#### **4.0 METHODOLOGY**

This assessment was conducted in accordance with the DOE "Safety System Oversight Program Implementation Assessment Criteria Review and Approach Documents (CRADs)." Focus areas of the CRADs include Program (PGM), Training and Qualification (TQ), Management (MG), and Oversight Performance (OP). Objectives of these focus areas are summarized below:

- PGM.1      An effective SSO Program is established by the Field Element Manager to apply engineering expertise to maintain safety system configuration and to assess system condition and effectiveness of safety management program implementation.**
- TQ.1        SSO personnel and supervisors with responsibilities for SSO personnel are appropriately trained and qualified, or are in the process of achieving qualification.**
- MG.1        SSO supervisors effectively perform their SSO Program responsibilities.**
- OP.1        Collectively, SSO personnel provide oversight of the contractors' Cognizant Engineer Program.**
- OP.2        SSO personnel are knowledgeable and familiar with assigned safety systems and/or programs.**

Each CRAD contains a set of criteria that must be evaluated to support the CRAD objective statement. These criteria were used by the assessment team to select the subject matter and

appropriate personnel for interviews, to determine the documentation to be reviewed, and to determine the need for field observations.

These interviews, documentation reviews, and field observations constituted the approach for gathering data to determine the implementation and effectiveness of the CBFO SSO Program. Based on these data, the team categorized the results from each CRAD into one of the following evaluation categories:

**Deficiency:**

A portion of the SSO Program that is not implemented, or a safety issue that merits priority attention from management.

**Area for Improvement:**

A recommendation made by the review team to enhance SSO Program implementation.

**Noteworthy Practice:**

An exemplary practice that contributes to successful application of the SSO Program.

## **5.0 ADMINISTRATION**

### **5.1 Team Organization and Composition**

The FTCP Agent of CBFO served as Team Leader for this assessment. The FTCP Agent from the Pantex Site Office (PXSO) was an invited guest assessor. The team consisted of the following individuals:

**Chuan-Fu Wu** (Team Leader) – Acting Deputy Manager, CBFO

**Karl Waltzer** (Guest Assessor) – Assistant Manager for Oversight and Assessment, PXSO

**George Basabilvazo** – Director, Office of Disposal, CBFO

**Andy Stanley** – Safety and Regulatory Compliance Specialist, CBFO Technical Assistance Contractor (CTAC)

**Jim Waters** – Safety and Operations Specialist, CTAC

Each team member was assigned to lead a focus area with which he is familiar, as shown in the following table:

<b>Review Team Member</b>	<b>Focus Area</b>
George Basabilvazo	Program
Jim Waters	Training and Qualification
Chuan-Fu Wu	Management
Karl Waltzer and Andy Stanley	Oversight Performance

Team members were selected in accordance with the following criteria:

- Familiarity with and knowledge of DOE SSO Programs and activities
- Experience in program review, assessment, audit, and surveillance
- Understanding of WIPP mission, processes, and procedures
- Operational experience and subject matter expertise in one or more focus areas

## 5.2 Team Preparation

In preparation for the assessment, team members reviewed and became familiar with the following documents:

- DOE P 426.1, *Federal Technical Capability Policy for Defense Nuclear Facilities*
- DOE M 426.1-1A, *Federal Technical Capability Panel Manual*
- DOE-STD-1146-2001, *General Technical Base Qualification Standard, DOE Defense Nuclear Facilities Technical Personnel*
- *Safety System Oversight (SSO) Program Implementation Assessment Criteria and Review Approach Documents (CRADs)*, Revision 0

## 6.0 SUMMARY OF ASSESSMENT

This assessment concluded that the CBFO SSO Program is satisfactorily implemented and functioning. Nevertheless, it needs to be formally documented as part of the overall Technical Qualification Program.

SSO personnel are aware of their oversight responsibilities and, in general, perform them conscientiously. However, the level, vigor, and formality of oversight activities varied among SSO personnel and, in some cases, was limited to annual system walkdowns.

The team identified two deficiencies, one relating to formal documentation of the SSO Program (see Deficiency PGM.D1) and the other to Senior Technical Safety Manager qualification requirements for supervisors responsible for SSO personnel (see Deficiency TQ.D1). The team also identified seven areas for improvement and two noteworthy practices. Detailed information on review of records, interviews, discussion of results, conclusion, and findings for each of the focus areas is provided in Attachment 1, Assessment Results.

## Attachment 1. Assessment Results

FUNCTIONAL AREA: PROGRAM (PGM)	OBJECTIVE MET	
	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

### OBJECTIVE:

**PGM.1 An effective SSO Program is established by the Field Element Manager to apply engineering expertise to maintain safety system configuration and to assess system condition and effectiveness of safety management program implementation.**

### ACCEPTANCE CRITERIA:

PGM.1.1 – PGM.1.7 (see SSO Program Implementation Assessment CRADs).

### RECORDS REVIEWED:

- DOE/CBFO 02-3219, *CBFO Technical Qualification Program Guide*
- DOE/WIPP 95-2065, *WIPP CH Documented Safety Analysis, Revision 8*
- DOE/WIPP 98-2287, *Safety Management Functions, Responsibilities, and Authorities Manual*, Revision 6, August 2004
- WP 09 CN-3025, *Annual System Walkdown*, Revision 1, October 29, 2004
- WP 09 *Engineering Conduct of Operations*, Revision 17, October 28, 2004
- WP 09-CN3023, *Functional Classification Determination for Design*, Revision 2, January 13, 2004
- *WTS WIPP Cognizant Engineer/Alternate Cognizant Engineer System Assignment List, Vital Safety Systems (VSS)*, Rev. 1, 10/25/04

### INTERVIEWS CONDUCTED:

Chuan-Fu Wu, CBFO  
Mike Oliver, CBFO  
Greg Sahd, CBFO  
Don Galbraith, CBFO  
Jim Waters, CTAC  
Randy Elmore, WTS  
Gary Morrison, WTS

### DISCUSSION OF RESULTS:

The CBFO document used to implement Chapter III, Section 1, 2.b(1) of DOE M 426.1-1A is DOE/CBFO 02-3219, *CBFO Technical Qualification Program Guide (TQPG)*. The CBFOTQPG was developed in accordance with DOE O 360.1B, DOE M 360.1-1B, and the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-3. The CBFO TQPG was developed several years ago and extends to all technical positions having significant environment, safety, and health responsibilities. The CBFO TQPG describes the process for developing Qualification Standards and Qualification Cards, and Qualifying Officials orientation, training, and responsibilities; supervisors responsibilities; qualification and continuing training, and individual training and qualification records. The CBFO TQPG is tailored to

FUNCTIONAL AREA: PROGRAM (PGM)	OBJECTIVE MET	
	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

achieve the WIPP site mission. The technical qualification process is described in the CBFO TQPG and the resultant standards and qualification cards and qualification process provide a basis so that CBFO SSO personnel are able to adequately perform safety systems oversight. However, the CBFO TQPG does not specifically mention the SSO Program.

Development of qualification standards and qualification cards for CBFO SSO personnel has been implemented consistent with the CBFO TQPG. In addition, CBFO Office of Disposal (OD) SSO staff, including the Facility Representative (FR), oversee the eight SSO systems and interact with the WTS counterparts responsible for the safety systems. CBFO SSO personnel and/or the CBFO FR formally participate in the annual walkdown of the WIPP site safety systems. In addition, CBFO SSO personnel informally interact periodically with the WTS engineers and/or managers responsible for the WIPP site safety systems. The roles of the CBFO FR and CBFO SSO personnel appear to be defined according to documentation that was previously (a year or two ago) provided and is generally understood by the contractor's cognizant system managers and engineers that were interviewed.

The safety systems identified in Chapter 4 of DOE/WIPP 95-2065, *WIPP CH Documented Safety Analysis*, align with the eight vital safety systems included in the CBFO SSO Program, as listed in the CBFO Safety System Oversight Program Assessment Plan (November 2004). The WTS procedures that allow the link between vital safety systems (VSS) and safety support systems (and structures, systems and components) are WP 09 CN-3025, *Annual System Walkdown*, WP 09-CN3023, *Functional Classification Determination for Design*, and WP 09, *Engineering Conduct of Operations*.

Several of the qualification standards and qualification cards for CBFO SSO personnel were reviewed and found to be consistent with the CBFO TQPG. The CBFO TQPG (Chapter 4, Subsection 4.1, page 10, 2<sup>nd</sup> paragraph) states: "The CBFO Manager has appointed the ABSTA as the qualifying official for CBFO...". The Authorization Basis Senior Technical Advisor (ABSTA) signature was on the CBFO OD SSO personnel qualification cards as the Qualifying Official.

## CONCLUSION:

Overall, there is a technical qualification program developed and implemented for CBFO SSO staff which provides a basis so that SSO personnel are able to adequately perform safety systems oversight. CBFO SSO personnel participate in annual oversight of the eight safety systems and informally interact with WTS engineers and/or managers responsible for the WIPP site safety systems. However, the CBFO SSO Program is not formally documented.

## Deficiency:

PGM.D1 – No formal CBFO SSO Program exists in relevant CBFO documents. Because there is no formal program, there is no formal assignment of SSO personnel to the eight safety systems at WIPP, no formal communication to WTS cognizant managers or cognizant engineers, and no process for establishing or updating CBFO SSO personnel roles and responsibilities.

**Team Member: George T. Basabilvazo, CBFO**

<b>FUNCTIONAL AREA: TRAINING AND QUALIFICATION (TQ)</b>	<b>OBJECTIVE MET</b>	
	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>

**OBJECTIVE:**

**TQ.1 SSO personnel and supervisors with responsibilities for SSO personnel are appropriately trained and qualified or are in the process of qualification.**

**ACCEPTANCE CRITERIA:**

TQ 1.1 – TQ 1.5 (see SSO Program Implementation Assessment CRADs).

**RECORDS REVIEWED:**

- DOE M 426.1-1A *Federal Capabilities Manual*
- DOE STD 1146-2001 *Technical Base Qualification*
- DOE CBFO 04-3299 *CBFO Contractor Oversight Plan*
- CBFO 02-3219 *Technical Qualification Program(TQP) Guide*
- CBFO Qualification Cards for all SSO assigned personnel in the Office of Disposal
- Matrix Crosswalk for SSO assigned personnel's qualification cards to verify requirements with a generic SSO qualification standard.

**INTERVIEWS CONDUCTED:**

George Basabilvaso, CBFO

**DISCUSSION OF RESULTS:**

The CBFO OD personnel have been assigned to provide oversight for specific WIPP safety systems which align with WTS designated VSS, and also align with the safety systems identified in the WIPP CH DSA, Rev. 8. The OD staff assigned to a specific system have been trained or have on-the-job (OJT) at a level of knowledge adequate to provide working-level oversight of the WIPP safety systems in accordance with DOE M 426.1-1A.

The assigned SSO personnel have updated, approved qualification cards with their specific SSO area knowledge documented. To further document this, a matrix was constructed to crosswalk each SSO personnel CBFO qualification card to the generic SSO qualification standard (currently a draft) on the DOE website. All CBFO SSO personnel are fully qualified to provide oversight in their assigned areas.

The CBFO Deputy Manager, who has been designated Acting Manager since November 5, 2004, was a qualified Senior Technical Safety Manager (STSM) while he was with the Richland Operations Office (RL). CBFO has converted his RL STSM qualification to a CBFO STSM qualification. The OD Director, who assumed the position in May 2004, will obtain STSM qualification by November 2005 (by the time he has been in his position for 18 months).



<b>FUNCTIONAL AREA: TRAINING AND QUALIFICATION (TQ)</b>	<b>OBJECTIVE MET</b>	
	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>

**CONCLUSION:**

This assessment identified one deficiency and one area for improvement.

**Deficiency:**

TQ.D1 – There are three line positions in the CBFO that have responsibilities for SSO personnel: the CBFO Manager’s Office, the Assistant Manager for Operations, and the OD Director. All these supervisory positions are required to maintain STSM qualification per DOE M 426.1-1A. Currently, only the position description for Assistant Manager for Operations identifies STSM qualification as a requirement. The other position descriptions must be revised to reflect the STSM requirement.

**Area for Improvement:**

TQ.AI1 – The CBFO TQP Guide should be updated to reflect SSO assignments and organizational changes.

**Team Member:** *Jim Waters, CTAC*

<b>FUNCTIONAL AREA: MANAGEMENT (MG)</b>	<b>OBJECTIVE MET</b>	
	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>

**OBJECTIVE:**

**MG.1 SSO supervisors effectively perform their SSO Program responsibilities.**

**ACCEPTANCE CRITERIA:**

MG.1.1 – MG.1.8 (see SSO Program Implementation Assessment CRADs).

**RECORDS REVIEWED:**

- CBFO 02-3219 *Technical Qualification Program (TQP) Guide*
- CBFO qualification standards and qualification cards for all SSO personnel

**INTERVIEWS CONDUCTED:**

Lloyd Piper, CBFO  
George Basabilvazo, CBFO  
Richard Farrell, CBFO  
Don Galbraith, CBFO  
Mike Oliver, CBFO  
Ernest Preciado, CBFO  
Greg Sahd, CBFO  
Jim Waters, CTAC

**DISCUSSION OF RESULTS:**

All CBFO SSO personnel participate in the TQP. Supervisors (the CBFO Deputy Manager and the OD Director) were involved in the identification and approval of SSO candidate selection. Site-specific SSO qualification standards and qualification cards were developed, approved, and implemented. All five SSO staff members have completed their qualification cards. The OD Director, who assumed his position in May 2004, is on schedule to complete his SSO qualification within 18 months of his current assignment.

The OD Director assisted the Qualifying Official in all stages of the SSO personnel qualification process. The OD Director provided input to the development of qualification standards and qualification cards to help ensure proper integration of SSO qualification requirements into the existing TQP. The OD Director helped with the facilitation of qualification activities, reviewed and evaluated training records, and participated in oral board examinations for all SSO qualification candidates. The OD Director also plans to periodically evaluate the SSO program and take necessary actions in a timely manner to enhance CBFO oversight effectiveness.

Responsibilities, training, and assignments of SSO personnel are not included in Individual Development Plans (IDPs). The OD Director and his staff will work together to ensure pertinent information is

<b>FUNCTIONAL AREA: MANAGEMENT (MG)</b>	<b>OBJECTIVE MET</b>	
	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>

incorporated in either the IDPs or the Performance Appraisal Plans.

**CONCLUSION:**

The criteria for MG.1 were met. One opportunity for improvement and one noteworthy practice were identified for this objective.

**Deficiencies:**

None.

**Area for Improvement:**

MG.AI1 – Oversight responsibilities, training requirements, and assignments for SSO personnel should be included and measured in either the individual IDPs or the Performance Appraisal Plans.

**Noteworthy Practices:**

MG.NP1 – The OD Director has revised the planning, development, and implementation of all SSO program activities to make them more efficient and streamlined. Although only in the position for a short time, his involvement has resulted in significant enhancement in the oversight program and the timely completion of SSO qualification standards and qualification cards.

**Team Member:** *Chuan-Fu Wu, CBFO*

<b>FUNCTIONAL AREA: OVERSIGHT PERFORMANCE (OP)</b>	<b>OBJECTIVE MET</b>	
	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>

**OBJECTIVE:**

**OP.1 Collectively, SSO personnel provide oversight of the contractor's system engineer program.**

**ACCEPTANCE CRITERIA:**

OP.1.1 – OP.1.4 (see SSO Program Implementation Assessment CRADs).

**RECORDS REVIEWED:**

- DOE/WIPP 98-2287, *Safety Management Functions, Responsibilities, and Authorities Manual*, Revision 6, August 2004
- DOE/CBFO 04-3299, *CBFO Contractor Oversight Plan*, Revision 0, April 16, 2004
- WIPP Cognizant Engineer/Alternate Cognizant Engineer System Assignment List
- CBFO SSO Assignments (Untitled and undated)
- WP 09-CN3025, *Annual System Walkdown*, Revision 0, January 15, 2004, and associated Annual System Walkdown form
- Carlsbad Field Office FY05 Integrated Evaluation Plan, Office of Disposal, October 1, 2004

**INTERVIEWS CONDUCTED:**

Randy Elmore, WTS  
Gary Morrison, WTS  
Norm Siepel, WTS  
Bill Barnhart, WTS  
Bill Wood, WTS  
Mike Oliver, CBFO  
Greg Sahd, CBFO  
George Basabilvazo, CBFO

**DISCUSSION OF RESULTS:**

CBFO SSO personnel are assigned to provide oversight for WIPP safety systems. However, the roles and responsibilities for SSO personnel are not explicitly defined in either the FRAM or in individual operating procedures.

CBFO SSO personnel informally obtain safety system information related to performance measures and metrics. However, with the exception of the annual system walkdowns, that information is not routinely and formally transmitted by WTS to CBFO. The team was unable to ascertain the existence of a set of performance metrics mutually agreed upon between CBFO and WTS.

CBFO SSO personnel are actively involved in the annual system walkdowns performed by WTS cognizant engineers for the safety systems for which they are responsible. SSO personnel also have

FUNCTIONAL AREA: OVERSIGHT PERFORMANCE (OP)	OBJECTIVE MET	
	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

regular interaction with WTS cognizant engineer managers. However, there is no formal documentation of CBFO SSO personnel assignments available to either CBFO or WTS personnel or managers. Discussions with the WTS cognizant engineers indicated that most of their interaction with CBFO relative to safety systems occurred with the CBFO FR, rather than with the SSO personnel assigned to that safety system. While SSO personnel routinely obtain information regarding the status of safety systems from WTS plan of the day and plan of the week meetings, there was no evidence to suggest that other routine mechanisms were in place to ensure that they receive real-time system performance information.

### CONCLUSION:

The acceptance criteria for this objective were met. Several opportunities for improvement are suggested that would enhance oversight performance.

### Deficiency:

None.

### Areas for Improvement:

OP.AI1 – The roles and responsibilities for SSO personnel should be explicitly defined in either the FRAM or in individual operating procedures or program documents.

OP.AI2 – A mutually agreed upon set of performance metrics between CBFO and WTS should be established.

OP.AI3 – CBFO SSO personnel assignments should be formally established, maintained, and transmitted to WTS.

OP.AI4 – SSO personnel could improve their awareness of real-time operation of their assigned safety systems by more frequent interaction with the respective WTS cognizant engineers.

**Team Members:** *Andy Stanley, CTAC*  
*Karl Waltzer, PXSO*

<b>FUNCTIONAL AREA: OVERSIGHT PERFORMANCE (OP)</b>	<b>OBJECTIVE MET</b>	
	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>

**OBJECTIVE:**

**OP.2 SSO personnel are knowledgeable and familiar with assigned safety systems and/or programs.**

**ACCEPTANCE CRITERIA:**

OP.2.1 – OP.2.11 (see SSO Program Implementation Assessment CRADs).

**RECORDS REVIEWED:**

- DOE/WIPP 98-2287, *Safety Management Functions, Responsibilities, and Authorities Manual*, Revision 6, August 2004
- DOE/CBFO 04-3299, *CBFO Contractor Oversight Plan*, Revision 0, April 16, 2004
- WIPP Cognizant Engineer/Alternate Cognizant Engineer System Assignment List
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- WP 09-CN3025, *Annual System Walkdown*, Revision 0, January 15, 2004 and associated Annual System Walkdown form
- Carlsbad Field Office FY05 Integrated Evaluation Plan, Office of Disposal, October 1, 2004
- CBFO/OOD Desktop Instruction, *CBFO Review of WIPP Engineering Change Proposals*
- Letter from Oliver to Garcia, dated July 20, 2004, transmitting CBFO document review record for ECP-1-WH03-101, *Automated Guided Vehicle System*.

**INTERVIEWS CONDUCTED:**

Randy Elmore, WTS  
Gary Morrison, WTS  
Norm Siepel, WTS  
Bill Barnhart, WTS  
Bill Wood, WTS  
Mike Oliver, CBFO  
Greg Sahd, CBFO  
George Basabilvazo, CBFO  
Don Galbraith, CBFO

**DISCUSSION OF RESULTS:**

CBFO SSO personnel were knowledgeable of their assigned safety systems. Performance-related information was typically provided through the annual system walkdown report produced by WTS and transmitted to CBFO. CBFO SSO personnel interviewed indicated that they maintained awareness of system status, operational history, and problems through a variety of interactions with WTS and by system walkdowns. However, the rigor and frequency of those interactions, and the level of oversight of WTS evaluation of problems and determination of corrective actions varied among the SSO personnel and, in some cases, was limited to the annual system walkdowns. A noteworthy practice used by one

FUNCTIONAL AREA: OVERSIGHT PERFORMANCE (OP)	OBJECTIVE MET	
	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>

member of the SSO staff was a personal computerized log used to record, track, and trend system status, issues and corrective actions.

CBFO SSO personnel perform design-related reviews of proposed changes to safety systems using a structured approach and provide comments formally to WTS for resolution. SSO personnel also provide input to other safety-related areas such as Integrated Safety Management System (ISMS) and DSA reviews. The review team did not observe any operationally related assessments performed by CBFO SSO personnel for assigned safety systems in FY04. This was noted as a deficiency in the 2004 ISMS review. CBFO has implemented corrective actions to correct this deficiency. These include preparation of a contractor oversight plan and a related integrated evaluation plan (IEP). The IEP includes several assessments of safety systems scheduled for FY05.

SSO personnel were cognizant of their responsibilities for informing management of potential or emerging hazards or significant issues related to the operation of safety systems. SSO personnel were also aware of their “stop work” authority, as well as notification and reporting requirements. SSO personnel do not serve as qualifying officials since they have not been assigned to perform that function. The CBFO ABSTA currently satisfies that role.

SSO personnel are involved in the budgetary process for assigned safety systems to assure an appropriate level of funding for safety system maintenance and improvement. That activity also serves to help SSO personnel assess the condition of safety systems.

### CONCLUSION:

The criteria for OP.2 were met. One opportunity for improvement and one noteworthy practice were identified for this objective.

### Deficiency:

None.

### Area for Improvement:

OP.AI5 – CBFO should evaluate the frequency of safety system oversight activities to determine the appropriate level of field time necessary for effective oversight and establish expectations in that regard for SSO personnel.

### Noteworthy Practices:

OP.NP1 – Use of a personal, computerized log by one of the SSO staff to record, track, and trend system status, issues and corrective actions.

**Team Members:** *Karl Waltzer, PXSO*  
*Andy Stanley, CTAC*

## **Appendix B**

### **CARLSBAD FIELD OFFICE VITAL SAFETY SYSTEM OVERSIGHT ASSIGNMENTS**





**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221

**AUG 26 2005**

Mr. Scott Anderson, Operations Manager  
Washington TRU Solutions, LLC  
P.O. Box 2078  
Carlsbad, NM 88220

Subject: CBFO Office of Disposal, Safety System Oversight Assignments

The purpose of this letter is to provide your organization the formal Carlsbad Field Office (CBFO) Office of Disposal (OD) Safety System Oversight (SSO) assignment responsibilities for communication and coordination purposes related to the Waste Isolation Pilot Plant (WIPP) Vital Safety Systems. The attached illustration provides a listing of the WIPP Safety Systems and the person assigned to conduct oversight for the CBFO OD. The CBFO Facility Representative will continue to be responsible for coordination of the OD SSO activities.

I recognize that Revision 9 of the Contact-Handled Documented Safety Analysis (DSA) (DOE/WIPP 95-2065) is in review at EM Headquarters. If the approval of the DSA significantly changes the information on the attachment I will provide you an update.

Please provide a schedule of the planned Washington TRU Solutions annual Safety System walk downs for fiscal year 2006 to Mr. Don Galbraith and myself by September 9, 2005. I will use this information in developing the fiscal year 2006 OD Integrated Evaluation Plan

If you have any questions on this please contact me at 234-8103.

Sincerely,

A handwritten signature in dark ink, reading "George T. Basabilvazo", is positioned above the typed name.

George T. Basabilvazo, Director  
Office of Disposal

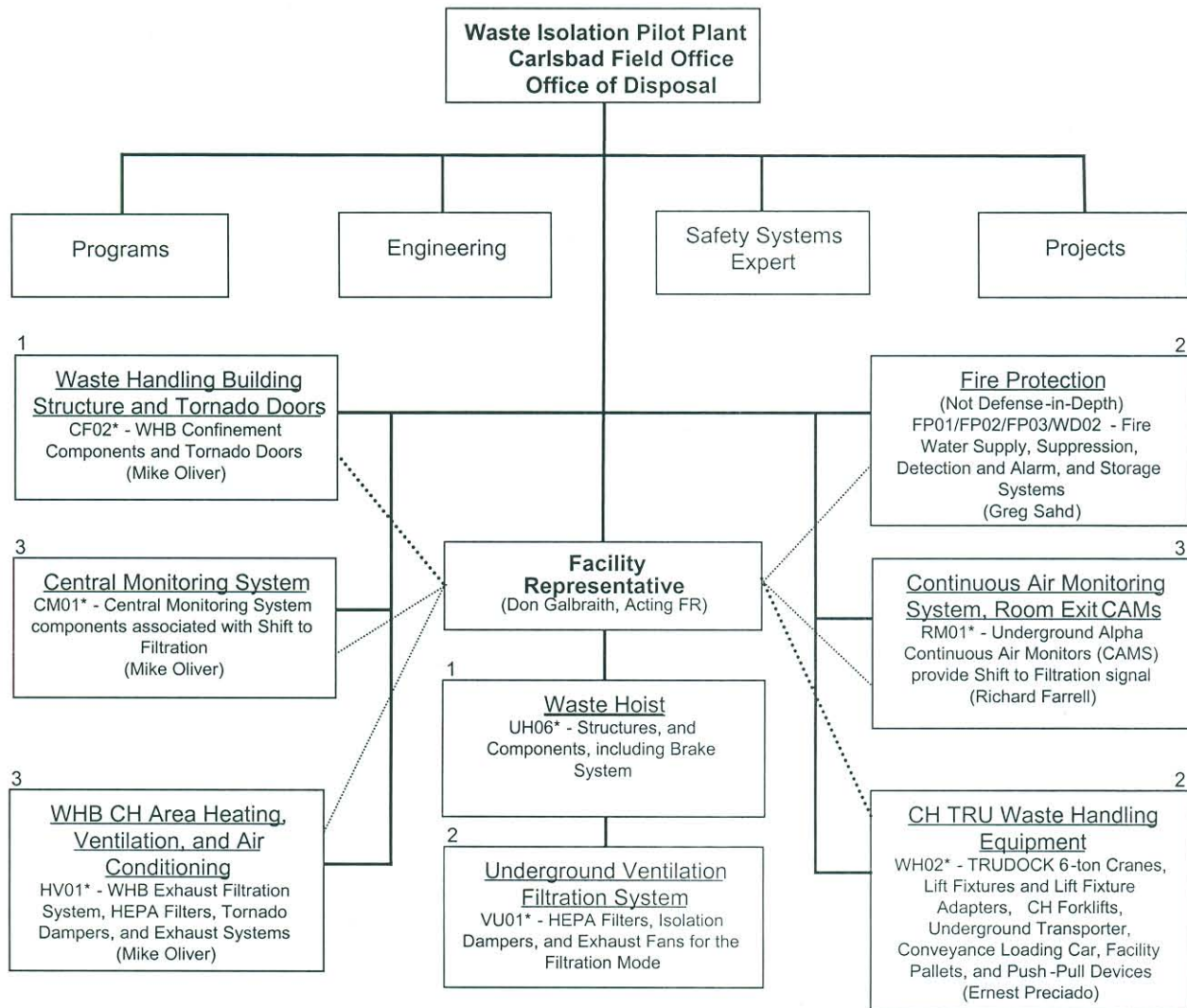
Enclosure

cc: w/enclosure

L. Piper, CBFO	* ED
V. Daub, CBFO	ED
C. Wu, CBFO	ED
D. Steffen, WTS	ED
CBFO M & RC	

\*ED denotes electronic distribution

## WIPP Vital Safety Systems



1. Safety Class
2. Safety Significant
3. Defense-in-Depth